

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent Application of: Shen)
Serial No.: New Application)
Filed: To Be Assigned) Atty Docket: D5437
For: Apparatus And Method For Evaluating Fuel Injectors)

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Preliminary to the examination of the above-identified application, Applicants wish to bring to the attention of the Examiner the references identified on the attached form PTO-1449, copies thereof being enclosed herewith.

U.S. Pat. No. 6,546,782 issued to Jose DeLaCruz and Paul Lacey on April 15, 2003 describes a High Temperature Pressurized High Frequency Testing Rig and Test Method.

U.S. Pat. No. 6,497,223 issued to Taner Tuken, Donald J. Benson, John T. Carroll, III, and Yul J. Tarr on Dec. 24, 2002 describes a Fuel Injection Pressure Control System for an Internal Combustion Engine.

U.S. Pat. No. 6,443,104 issued to Stefan Simescu, Thomas W. Ryan, III and Daniel W. Dickey on Sep. 3, 2002, describes an Engine and Method for Controlling Homogeneous Charge Homogeneous Charge Compression in a Diesel Engine.

U.S. Pat. No. 5,412,981 issued to W. Neill Myers, Ewell M. Scott, John C. Forbes and Michael D. Shadoan on May 9, 1995, describes an Apparatus for Testing High Pressure Injector Elements.

U.S. Pat. No. 5,359,883 issued to Darryl D. Baldwin and Tien D. Doan on Nov. 1, 1994, describes an Apparatus and Method for Analyzing Events for an Internal Combustion Engine.

U.S. Pat. No. 4,712,421 issued to Jeffrey H. Young on Dec. 15, 1987 describes a Fuel Injector Testing Device.

U.S. Pat. No. 4,721,247 issued to Julius P. Perr on Jan. 26, 1988 describes a High Pressure Unit Fuel Injector.

U.S. Pat. No. 4,559,821 issued to Paul Engeler and Peter Wolfer on Dec. 24, 1985, describes a High Pressure Transducer.

U.S. Pat. No. 4,337,650 issued to Herman F. Brandt on Jul. 6, 1982, describes a Diesel Engine Start of Fuel Injection Detecting System.

U.S. Pat. No. 4,061,027 issued to Reginald Stanley Emerson on Dec. 6, 1977 describes a Fuel Injector Testing Apparatus.

David P. Schmidt, Tzay-Fa Su, Kayhan H. Goney, P. V. Farrell & M. L. Corradini, Detection of Cavitation in Fuel Injector Nozzles (Engine Research Center at the University of Wisconsin).

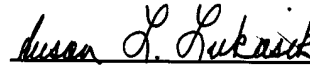
Timothy J. Callahan & Gary D. Bourn, Investigation of Diesel Spray Penetration, Vaporization, and Combustion in a Pilot-Ignited Natural Gas Engine 03-9074 (Southwest Research Institute 2003).

Standard Test Method for Shear Stability of Polymer Containing Fluids Using a European Diesel Injector Apparatus D6278-02 (ASTM International 2003) <www.astm.org>.

Evaluation of the Mechanical Shear Stability of Lubricating Oils Containing Polymers (Fuel Injection Pump) CEC L-14-A-93 (Co-ordinating European Council 2003) <www.cectest.org>.

An action on the merits is requested.

Respectfully submitted,



Susan L. Lukasik

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Date: August 14, 2003

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
Application Number		New Application			
Filing Date		To Be Assigned			
First Named Inventor		Yunbiao Shen			
Art Unit					
Examiner Name					
Attorney Docket Number		D5437			

Sheet	1	of	2
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U.S. PATENT DOCUMENTS					
Examiner Initials ⁷	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US- 6,546,782	4/15/2003	DeLaCruz et al.	
		US- 6,497,223	12/24/2002	Tuken et al.	
		US- 6,443,104	9/3/2002	Simescu et al.	
		US- 5,412,981	5/9/1995	Myers et al.	
		US- 5,359,883	11/1/1994	Baldwin et al.	
		US- 4,712,421	12/15/1987	Young	
		US- 4,721,247	1/26/1988	Perr	
		US- 4,559,821	12/24/1985	Engeler et al.	
		US- 4,337,650	7/6/1982	Brandt	
		US- 4,061,027	12/6/1977	Emerson	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials ⁷	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO		C mplete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	New Application
		Filing Date	To Be Assigned
		First Named Inventor	Yunbiao Shen
		Group Art Unit	
		Examiner Name	
Sheet 2 of 2	Attorney Docket Number	D5437	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		DAVID P. SCHMIDT, TZAY-FA SU, KAYHAN H. GONEY, P.V. FARRELL & M.L. CORRANDINI, "Detection of Cavitation in Fuel Injector Nozzles," (Engine Research Center at the University of Wisconsin).	
		TIMOTHY J. CALLAHAN & GARY D. BOURN, "Investigation of Diesel Spray Penetration, Vaporization, and Combustion in a Pilot-Ignited Natural Gas Engine," 03-9074 (Southwest Research Institute 2003).	
		"Standard Test Method for Shear Stability of Polymer Containing Fluids Using a European Diesel Injector Apparatus," D6278-02 (ASTM International 2003) <www.astm.org>.	
		"Evaluation of the Mechanical Shear Stability of Lubricating Oils Containing Polymers," (Fuel Injection Pump) CEC L-14-A-93 (Co-ordinating European Council 2003) <www.cectests.org>.	

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